

Date⇒ 27-01-2021

Module⇒ Backend

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Subject ⇒ Node.js/Express

IN PREVIOUS LECTURE (QUICK RECAP) Date-25/1/2021	In Today's Lecture (Overview)
What Is Nodemon Usage What Is Crud What is Express Node.js ExpressJS - Hello World Routers Route methods	Request in Node.js Database Collection Document Sql vs Nosql How to Install Mongoddb

Request in Node.js

Request is designed to be the simplest way possible to make http calls. It supports HTTPS and follows redirects by default.

`npm i request`

```
const request = require('request');
request('http://www.google.com', function (error, response, body) {
  console.error('error:', error); // Print the error if one occurred
  console.log('statusCode:', response && response.statusCode); // Print
the response status code if a response was received
  console.log('body:', body); // Print the HTML for the Google homepage.
});
```

To easily handle errors when streaming requests, listen to the `error` event before piping:

```
request
  .get('http://mysite.com/doodle.png')
  .on('error', function(err) {
    console.error(err)
  })
```

```
.pipe(fs.createWriteStream('doodle.png'))
```

MongoDB is an open-source document database and leading NoSQL database. MongoDB is written in C++.

Database

Database is a physical container for collections. Each database gets its own set of files on the file system. A single MongoDB server typically has multiple databases.

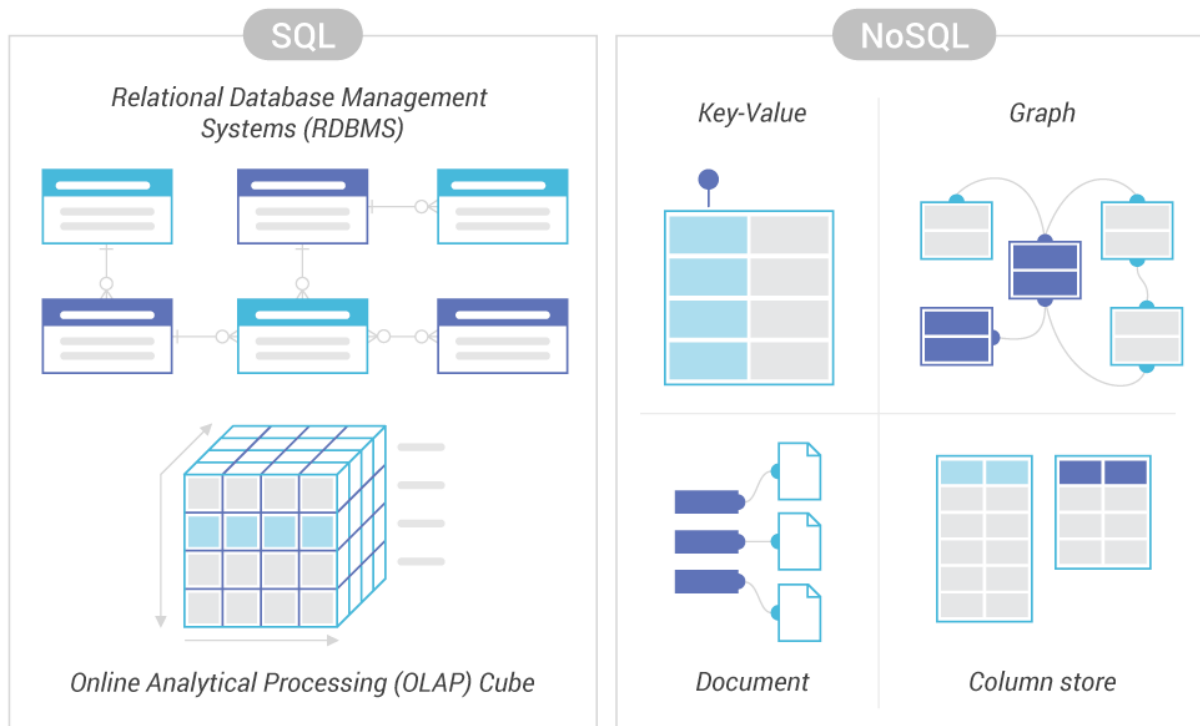
Collection

Collection is a group of MongoDB documents. It is the equivalent of an RDBMS table. A collection exists within a single database. Collections do not enforce a schema. Documents within a collection can have different fields. Typically, all documents in a collection are of similar or related purpose.

Document

A document is a set of key-value pairs. Documents have dynamic schema. Dynamic schema means that documents in the same collection do not need to have the same set of fields or structure, and common fields in a collection's documents may hold different types of data.

Sql vs Nosql



	SQL Databases	NoSQL Databases
Data Storage Model	Tables with fixed rows and columns	Document: JSON documents, Key-value: key-value pairs, Wide-column: tables with rows and dynamic columns, Graph: nodes and edges

Development History	Developed in the 1970s with a focus on reducing data duplication	Developed in the late 2000s with a focus on scaling and allowing for rapid application change driven by agile and DevOps practices.
Examples	Oracle, MySQL, Microsoft SQL Server, and PostgreSQL	Document: MongoDB and CouchDB, Key-value: Redis and DynamoDB, Wide-column: Cassandra and HBase, Graph: Neo4j and Amazon Neptune
Primary Purpose	General purpose	Document: general purpose, Key-value: large amounts of data with simple lookup queries, Wide-column: large amounts of data with predictable query patterns, Graph: analyzing and traversing relationships between connected data
Schemas	Rigid	Flexible
Scaling	Vertical (scale-up with a larger server)	Horizontal (scale-out across commodity servers)

Multi-Record ACID Transactions	Supported	Most do not support multi-record ACID transactions. However, some—like MongoDB—do.
Joins	Typically required	Typically not required
Data to Object Mapping	Requires ORM (object-relational mapping)	Many do not require ORMs. MongoDB documents map directly to data structures in most popular programming languages.

How to Install Mongoddb

The Following tutorial will help You to get started With Mongo Db
<https://www.youtube.com/watch?v=FwMwO8pXfq0>